

## **REMARKS**

Upon entry of this amendment, claims 1-14 are all the claims pending in the application. Claim 14 has been added as a new claim. No new matter has been added.

### **I. Claim Rejections under 35 U.S.C. § 103(a)**

Claims 1-13 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto et al. (Adaptive internally turbo-coded ultra wideband-impulse radio) in view of Eidson (US 2004/0047284).

Claim 1, as amended, recites that the n-piece repetitive pulse trains are composed by performing, in accordance with a state of the communication path, weighting on a plurality of encoded bits, the weighting being performed such that, for each of the encoded bits, a number of repetitive pulses allotted to the encoded bit is based on the susceptibility of the encoded bit to an adverse effect, with an encoded bit that is susceptible to the adverse effect being allotted more repetitive pulses than an encoded bit that is not susceptible to the adverse effect, thereby adaptively adjusting the number of repetitive pulses of each of the n-piece repetitive pulse trains.

Applicant respectfully submits that Yamamoto and Eidson do not teach or suggest at least the above-noted feature recited in amended claim 1.

Regarding the Eidson reference, Applicant notes that in the Office Action, the Examiner has pointed to Fig. 5 of Eidson and the disclosure therein which indicates that pilot symbols (PS) can be used with different, typically shorter, lengths and in repetition groups having varying numbers for P and J (e.g., see Office Action at page 5).

In this regard, as shown in Fig. 5 of Eidson, Applicant notes that this drawing illustrates the burst preamble 602, the data structure of which is shown in Fig. 6 of Eidson. With respect to

Fig. 6 of Eidson, Applicant notes that this drawing illustrates a burst communication timing structure 600 having the burst preamble 602, as well as a payload 604 which is the main element of the data and is not changed (see Fig. 6).

Based on the foregoing description of Eidson, Applicants note that while Eidson discloses that the burst preamble, which is similar to a header of the data, may be changed by varying numbers for J and P, that Eidson does not disclose or in any way suggest the above-noted feature recited in amended claim 1 which indicates that n-piece repetitive pulse trains are composed by performing, in accordance with a state of the communication path, weighting on a plurality of encoded bits, the weighting being performed such that, for each of the encoded bits, a number of repetitive pulses allotted to the encoded bit is based on the susceptibility of the encoded bit to an adverse effect, with an encoded bit that is susceptible to the adverse effect being allotted more repetitive pulses than an encoded bit that is not susceptible to the adverse effect, thereby adaptively adjusting the number of repetitive pulses of each of the n-piece repetitive pulse trains.

Further, Applicant respectfully submits that Yamamoto does not cure the above-noted deficiency of Eidson.

In view of the foregoing, Applicant respectfully submits that the cited prior art references do not teach, suggest or otherwise render obvious the above-noted feature recited in amended claim 1. Accordingly, Applicant submits that amended claim 1 is patentable over the cited prior art, an indication of which is kindly requested.

Regarding claims 2, 3, 12, and 13, Applicant notes that each of these claims has been amended in a similar manner as claim 1 so as to recite that the n-piece repetitive pulse trains are composed by performing, in accordance with a state of the communication path, weighting on a

plurality of encoded bits, the weighting being performed such that, for each of the encoded bits, a number of repetitive pulses allotted to the encoded bit is based on the susceptibility of the encoded bit to an adverse effect, with an encoded bit that is susceptible to the adverse effect being allotted more repetitive pulses than an encoded bit that is not susceptible to the adverse effect, thereby adaptively adjusting the number of repetitive pulses of each of the n-piece repetitive pulse trains.

For at least similar reasons as discussed above with respect to claim 1, Applicant respectfully submits that Yamamoto and Eidson do not teach, suggest or otherwise render obvious the above-noted feature recited in claims 2, 3, 12 and 13. Accordingly, Applicant submits that claims 2, 3, 12 and 13 are patentable over the cited prior art, an indication of which is kindly requested.

Regarding claims 4-11, Applicant notes that these claims depend from claim 3 and are therefore patentable at least by virtue of their dependency.

Regarding new claim 14, Applicant notes that this claim has been drafted so as to recite that the n-piece repetitive pulse trains are composed by performing, in accordance with a state of the communication path, weighting on a plurality of encoded bits, the weighting being performed such that, for each of the encoded bits, a number of repetitive pulses allotted to the encoded bit is based on the susceptibility of the encoded bit to an adverse effect, with an encoded bit that is susceptible to the adverse effect being allotted more repetitive pulses than an encoded bit that is not susceptible to the adverse effect, thereby adaptively adjusting the number of repetitive pulses of each of the n-piece repetitive pulse trains.

For at least similar reasons as discussed above with respect to claim 1, Applicant respectfully submits that Yamamoto and Eidson do not teach, suggest or otherwise render

obvious the above-noted feature recited in new claim 14. Accordingly, Applicant submits that new claim 14 is patentable over the cited prior art, an indication of which is kindly requested.

## **II. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may best be resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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